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10/807,542

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EXAMINER

NADKARNI, SARVESH J

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/807,542	<b>Applicant(s)</b> OTA, YUSUKE	
	<b>Examiner</b> SARVESH J. NADKARNI	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 5-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

### DETAILED ACTION

**This Office Action is in response to the Amendment filed January 15, 2008, in relation to Application Number: 10/807,542 (hereinafter referred to as “amendment”).**

**Claims 2 and 4 have been cancelled. Claims 1, 3, 8 and 9 have been amended. Claims 10 and 11 are newly added. Therefore, claims 1, 3, 5-11 are currently pending.**

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 5-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Akimoto et al., United States Patent Number US 6,856,308 B2 (hereinafter referred to as “Akimoto ‘308”).

1. With regard to claim 1, Akimoto ‘308 clearly teaches **a display driver for driving data lines of an electro optic device based on display data** (see FIG. 1 generally and further described at column 4, lines 1-37) **comprising: a display data random access memory** (see FIGs 1 and 2 disclosing an SRAM frame memory 7 further described at column 5, lines 45-end) **including a plurality of word lines** (see FIG. 2 element 22 and column 5, lines 46-50), **a plurality of column lines** (see column 5, lines 50-60 describing data lines 26 further see FIG. 2 element 26), **and a plurality of memory cells each storing display data of one pixel** (see FIG. 2, element 21, further described in column 5, lines 46-48); **a display address decoder selecting**

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**a word line of the display data random access memory based on a display address** (see column 5, lines 60-65, describing X decoder 31 further illustrated in FIG. 2); **a display column address decoder selecting a column line of the display data random access memory based on a display column address** (see FIG. 2, further described in column 5, lines 49-50, Y decoder 23); **a plurality of read-out bit lines each commonly coupled to a memory cell group specified by a corresponding column line** (see FIG. 2, and further described at column 6, lines 30-44); **a scroll bus coupled to the plurality of read-out bit lines** (see FIG. 1, bus 18 further described at column 6, lines 45-48); **a shift register outputting a shift output shifted based on a given shift clock** (see FIG. 1 further described in column 4, lines 25-30, 43-65 describing shift register 4, based on control signal), **the shift register including a plurality of shift register latches** (see FIG. 1, lines 25-65, shift register is a compilation of latches); **a line latch loading display data that are loaded in a plurality of data latches in one horizontal scan cycle** (see FIG. 10, first latch circuit, element 82, further described in column 8, lines 47-48 further describing one scanning cycle at column 9, lines 50-65); **the plurality of data latches, each of which corresponds to one of the data lines of the electro optic device** (see FIG. 10, second latch circuit element 85, further described in column 8, lines 52-55), **the plurality of data latches loading display data on the scroll bus** (see column 8, lines 55-60 describing element 79), **each data latch being connected to the line latch** (see FIG. 10 and further describe in column 8, lines 43-60) **and to a shift register latch of said plurality of shift register latches** (see FIG. 10, further described in column 8, lines 43-end); **and a driving circuit driving the data lines based on the display data loaded in the plurality of data latches** (see FIG. 11, describing driving operation of DA converter 11 at column 9, lines 10-30); **display data of one**

**pixel being read out from a memory cell specified by a word line selected by the display address decoder and a column line selected by the display column address decoder (see FIG. 14 and further column 15, lines 9-42), the data being output to the scroll bus via the read-out bit line coupled to the memory cell (see FIG.14 and further column 14, line 49-57 and additionally at column 15, lines 9-42, alternatively described at column 6, lines 45-52), the data on the scroll bus being loaded in each of the plurality of data latches (see FIG. 14, further at column 15, lines 30-43, and alternatively described at column 6, lines 31-end) the display data being shifted from the scroll bus for storing in the plurality of data latches (see at least column 6, lines 45-end and FIG. 14), and each of the plurality of data latches loads display data on the scroll bus on the shift output of each stage of the shift register (see column 6, lines 31-end and further continued at column 7 lines 1-3).**

2. With regard to claim 3, Akimoto '308 in view of Oka '200 clearly teaches **the display driver according to claim 1 (see above), the driving circuit driving the data lines based on display data loaded in the line latches instead of the plurality of data latches (see Akimoto '308 at column 6, lines 53-end).**

3. With regard to claim 5, Akimoto '308 in view of Oka '200 clearly teaches **an electro optic device (see Akimoto '308 FIG.1 element 50), comprising: a plurality of scan lines (see Akimoto '308, FIG. 1 at column 4, lines 5-15 gate line 3); a plurality of data lines (see Akimoto '308, FIG. 1 at column 4, lines 10-20 describing signal line 5); a plurality of pixels coupled to the plurality of scan lines and the plurality of data lines (see Akimoto '308 column 4, lines 5-10 describing a pixel cell 10); a scan driver scanning the plurality of scan lines (see Akimoto '308 describing gate line shift register 4, drives the gate lines 3 in**

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conjunction with other elements); **and the display driver according to claim 1 driving the plurality of data lines** (see claim 1 above).

4. With regard to claim 6, Akimoto '308 in view of Oka '200 clearly teaches **an electro optic device** (see Akimoto '308 FIG.1 element 50), **comprising: a display panel** (see Akimoto '308 column 4, lines 32-36 describing display panel) **including a plurality of scan lines** (see Akimoto '308, FIG. 1 at column 4, lines 5-15 gate line 3), **a plurality of data lines** (see Akimoto '308, FIG. 1 at column 4, lines 10-20 describing signal line 5), **and a plurality of pixels coupled to the plurality of scan lines and the plurality of data lines**(see Akimoto '308 column 4, lines 5-10 describing a pixel cell 10); **a scan driver scanning the plurality of scan lines** (see Akimoto '308 describing gate line shift register 4, drives the gate lines 3 in conjunction with other elements); **and the display driver according to claim 1 driving the plurality of data lines** (see claim 1 above).

5. With regard to claim 7, Akimoto '308 in view of Oka '200 clearly teaches **an electronic apparatus, comprising: the electro optic device according to claim 5** (see above); **and a display data generator generating display data to be supplied to the electro optic device** (see Akimoto '308 describing MUP 15 at but not limited to column 4, lines 42-65).

6. With regard to claim 8, it is similarly analyzed as claim 1 above and rejected under the same rationale. The method for driving is similar to the display driver as described in claim 1.

7. With regard to claim 9, it is similarly analyzed as claim 3 above as dependent on claim 1 and rejected under the same rationale. The method of driving is similar to the display driver as described in claim 1.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al., United States Patent Number US 6,856,308 B2 (hereinafter referred to as “Akimoto ‘308”) as applied to claims 1 and 8 above respectively, and further in view of Oka et al., United States Patent Number 4,600,200 (hereinafter referred to as “Oka ‘200”).

10. Regarding claim 10, Akimoto ‘308 clearly teaches the display driver for driving data lines of an electro optic device based on display data according to Claim 1, but does not explicitly teach **an image generated by loading the said display data being scrolled in an oblique direction to upper right, upper left, lower right, and lower left by combining vertical scrolling and horizontal scrolling based on the data output to the scroll bus and based on the shift output of each stage of the shift register.**

11. In the same field of endeavor, Oka ‘200 clearly teaches **an image generated by loading said display data is scrolled in an oblique direction to upper right, upper left, lower right, and lower left by combining vertical scrolling and horizontal scrolling based on the data output to the scroll bus** (see Abstract generally and further described in column 2, lines 7-30 describing operation, and additionally in column 4, lines 14-24) **and based on the shift output of each stage of the shift register** (see column 6, lines 21-37).

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12. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have been motivated to incorporate the scrolling system as taught by Oka '200 into the display system of Akimoto '308 because both are within the same field of endeavor and furthermore, Oka '200 improves processing of moving images and objects, a common goal with in the art (see Oka '200 at column 1, lines 48-55).

13. Claim 11 is similarly analyzed as claim 10 above and rejected under the same rationale.

### ***Response to Arguments***

14. Applicant's arguments filed January 15, 2008 have been fully considered but they are not persuasive. On page 9 Applicant argues that Akimoto is "silent as to the scroll bus coupled to the plurality of read-out bit lines and the shift register" and "silent as to the plurality of data latches, each of which corresponds to one of the data lines of the electro optic device, loading display data on the scroll bus, each data latch being connected to the line latch and to the shift register latches and "further silent as to the data being output to the scroll bus via the read-out bit line coupled to the memory cell, the data on the scroll bus being loaded in each of the plurality of data latches" and "further silent as to each of the plurality of data latches loading display data on the scroll bus based on the shift output of each stage of the shift register". Examiner respectfully disagrees with this assessment. As addressed above, Akimoto clearly teaches these limitations. In order to avoid redundancy of argument, these limitations will not be readdressed here.

15. Further on page 9, Applicant argues Oka is also silent as to these limitations. Oka however is used in combination with Akimoto as presented above to address claims 10 and 11.



Therefore, in order to avoid redundancy of argument, these limitations as addressed by Akimoto above will not be readdressed here.

***Conclusion***

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARVESH J. NADKARNI whose telephone number is (571)270-1541. The examiner can normally be reached on 11AM-7PM EST Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sarvesh J. Nadkarni  
Examiner – Art Unit 2629

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